

APOPCYTO Caspase-3 Colorimetric Assay Kit

Issue date: 28/Sep/2023

Safety Data Sheet

Section 1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:

Product name: APOPCYTO Caspase-3 Colorimetric Assay Kit

SDS NO : 4800_100M_E-1

Component: Cell Lysis Buffer

Product code:4800

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the product: Research and Development

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: Medical & Biological Laboratories (MBL) Co., Ltd.

Address: 1018-1 Terasawaoka, Ina-shi, Nagano-ken 396-0002, Japan

Division: SDS Support

Telephone number: +81-265-76-1777

e-mail address: sds-support@mbl.co.jp

1.4 Emergency telephone number: +81-265-76-1777 (Monday to Friday, 9 AM to 5 PM JST)

Section 2. Hazards identification

GHS classification and label elements of the product

2.1 Classification of the substance or mixture

Classification according to Hazard Communication Standard – 2012 (29 CFR 1910.1200)

Not classified/Classification not possible

2.2 Label elements

No GHS label element

No Signal word

2.3 Other hazards

The product does not contain any ingredient designated as PBT and/or vPvB.

The product does not contain any ingredients designated as Endocrine disrupting properties.

Section 3. Composition/information on ingredients

Mixture/Substance selection:

3.2 Mixture

Ingredient name	Content (%)	CAS No.	ECNO	Classification according to REGULATION (EC) No.1272/2008 [CLP]
HEPES	2.38	7365-45-9	230-907-9	-
Sodium chloride	0.58	7647-14-5	231-598-3	-
Calcium Chloride Dihydrate	0.02	10035-04-8	-	-
Magnesium Chloride Hexahydrate	0.02	7791-18-6	-	-
Glycerin	10.00	56-81-5	200-289-5	-
Poly(oxyethylene) nonylphenyl ether	0.05	9016-45-9	500-024-6	-
CHAPS	0.10	75621-03-3	-	-
Sodium azide	0.09	26628-22-1	247-852-1	Acute Tox. 2 *, H300; Aquatic Acute

		8		1, H400; Aquatic Chronic 1, H410; EUH032
Water	86.00	7732-18-5	231-791-2	-

Section 4. First-aid measures

4.1 Descriptions of first-aid measures

General measures

P314-Get medical advice/attention if you feel unwell.

IF INHALED

P304 + P312-Call a POISON CENTER/doctor/physician if you feel unwell.

IF ON SKIN (or hair)

P302 + P352-Wash with plenty of soap and water.

IF IN EYES

P305 + P351 + P338-Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF SWALLOWED

P301 + P312-Call a POISON CENTER/doctor/physician if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Specific information on symptom and effect are unknown.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

Unsuitable extinguishing media

Unsuitable extinguishing media data is not available.

5.2 Specific hazards arising from the substance or mixture

Specific hazards arising from the substance or mixture is not available.

5.3 Advice for firefighters

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters

P280A-Wear protective gloves/protective clothing/eye protection/face protection.

Section 6. Accidental release measures

6.1 Personnel precautions, protective equipment and emergency procedures

Stop leak if safe to do so.

6.2 Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

6.3 Methods and materials for containment and cleaning up

Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

Preventive measures for secondary accident

P376-Stop leak if safe to do so.

Stop leak if you can do it without risk.

Prevent entry into waterways, sewers, basements or confined areas.

6.4 Reference to other sections

Refer to section 13

Section 7. Handling and storage

7.1 Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

P260-Do not breathe dust/fume/gas/mist/vapors/spray.

Safety Measures

P280A-Wear protective gloves/protective clothing/eye protection/face protection.

Any incompatibilities data is not available.

Advice on general occupational hygiene

P264-Wash contaminated parts thoroughly after handling.

P270-Do not eat, drink or smoke when using this product.

7.2 Storage

Conditions for safe storage

P233-Keep container tightly closed.

P235 + P410-Keep cool. Protect from sunlight.

Container and packaging materials for safe handling data is not available.

7.3 Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Adopted value

(Sodium azide)

ACGIH(1996) STEL: C (as Sodium azide) 0.29mg/m³; (as Hydrazoic acid vapor) 0.11ppm (Card impair; lung dam)

EU Occupational exposure limit values (Workplace Exposure limits) compliant to relevant EU Directive through 91/332/EEC to 2019/1831/EU

(Sodium azide)

LTEL: 0.1mg/m³

STEL: 0.3mg/m³ (SKIN)

OSHA-PEL

(Glycerin)

TWA: 15mg/m³ (Total dust)

TWA: 5mg/m³ (Respirable fraction)

NIOSH-REL

(Glycerin)

See Appendix D

8.2 Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Individual protection measures

Hand protection

Wear protective gloves.

Eye protection

Wear eye/face protection.

Skin and body protection

Wear protective clothing.

Section 9. Physical and Chemical Properties

APOPCYTO Caspase-3 Colorimetric Assay Kit

9.1 Information on basic physical and chemical properties

Physical state: Liquid

Color: Colorless

Odor data is not available.

Melting point/Freezing point data is not available.

Boiling point or initial boiling point data is not available.

Boiling range data is not available.

Flammability (gases, liquids and solids) data is not available.

Lower and upper explosion limit/flammability limit data is not available.

Flash point data is not available.

Auto-ignition temperature data is not available.

Decomposition temperature data is not available.

pH: 7.2

Kinematic viscosity data is not available.

Solubility:

Solubility in water data is not available.

n-Octanol/water partition coefficient data is not available.

Vapor pressure data is not available.

Density and/or relative density data is not available.

Relative vapor density (Air=1) data is not available.

Particle characteristics data is not available.

9.2 Other information

Other information is not available.

Section 10. Stability and Reactivity

10.1 Reactivity

Reactivity data is not available.

10.2 Chemical stability

Stable under normal storage/handling conditions.

10.3 Possibility of hazardous reactions

Possibility of hazardous reactions data is not available.

10.4 Conditions to avoid

Conditions to avoid data is not available.

10.5 Incompatible materials

Incompatible materials data is not available.

10.6 Hazardous decomposition products

Hazardous decomposition products data is not available.

Section 11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Acute toxicity (Dermal)

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Acute toxicity (Inhalation)

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Acute toxicity data is not available.

Irritant properties

Skin corrosion/irritation

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Skin corrosion/irritation data is not available.

Serious eye damage/irritation

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Serious eye damage/irritation data is not available.

Sensitization

Respiratory sensitization

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Skin sensitization

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Allergenic and sensitizing effects data is not available.

Germ cell mutagenicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Mutagenic effects data is not available.

Carcinogenicity

[Product]

Classification not possible (Insufficient data available or no data available).

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[Product data]

No data available.

[Data for components of the product]

No data available.

[ACGIH]

(Sodium azide)

A4(1996) : Not Classifiable as a Human Carcinogen

Reproductive toxicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Teratogenic effects data is not available.

Reproductive toxicity data is not available.

Specific target organ toxicity (STOT)

STOT-single exposure

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

STOT-single exposure data is not available.

STOT-repeated exposure

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

STOT-repeated exposure data is not available.

Aspiration hazard

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Aspiration hazard data is not available.

11.2 Information on other hazards

Endocrine disrupting properties is not available.

Section 12. Ecological Information

12.1 Toxicity

Aquatic toxicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

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Toxicity data is not available.

Water solubility

(Glycerin)

miscible (ICSC, 2006)

(Sodium azide)

good (41.7 g/100 ml, 17°C) (ICSC, 2014)

12.2 Persistence and degradability

[Data for components of the product]

(Poly(oxyethylene) nonylphenyl ether)

BOD_Degradation : 0% (METI existing chemical safety inspections, 1982)

(Sodium azide)

Degradation measured by HPLC : 1% (METI existing chemical safety inspections)

12.3 Bioaccumulative potential

[Data for components of the product]

(Glycerin)

log Pow=-1.76 (ICSC, 2006)

(Sodium azide)

log Pow <= 0.3 (Check & Review, Japan)

12.4 Mobility in soil

Mobility in soil data is not available.

12.5 Results of PBT and vPvB assessment

PBT and/or vPvB assessment data is not available.

12.6 Endocrine disrupting properties

Endocrine disrupting properties is not available.

12.7 Other adverse effects

Ozone depleting chemical data is not available.

Section 13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

13.1 Waste treatment methods

P273-Avoid release to the environment.

P501-Dispose of contents/container in accordance with local/national regulation.

Contaminated packing

Dispose of container after using the contents completely.

Section 14. Transport Information

UN No., UN CLASS

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

ADR (European Agreement concerning the International Carriage of Dangerous Goods by Road)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

ADN (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

APOPCYTO Caspase-3 Colorimetric Assay Kit

14.4 Packing group : Not regulated

RID (Regulation concerning the International Carriage of Dangerous goods by Rail)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

IMDG Code (International Maritime Dangerous Goods Regulations)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

IATA (Dangerous Goods Regulations)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

14.5 Environmental hazards

Marine pollutants (yes/no) : no

14.6 Special precautions for user

Special precautions for user is not applicable.

14.7 Maritime transport in bulk according to IMO instruments

MARPOL Annex II – Noxious Liquid Substances

Noxious Liquid Substances ; Cat. Z

Glycerin

Noxious Liquid Substances ; Cat. Z equiv.

Sodium chloride

Non Noxious Liquid Substances ; Cat. OS

Water

MARPOL Annex V – HME (Harmful to the Marine Environment)

Not applicable to Maritime transport in bulk according to IMO instruments.

Section 15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

The product does not contain any ingredients listed in REACH SVHC candidate list.

U.S. Toxic Substances Control Act (TSCA) Inventory

Chemicals listed in TSCA Inventory

Glycerin; HEPES; Sodium chloride; Water; Poly(oxyethylene) nonylphenyl ether; Sodium azide

Superfund Amendments and Reauthorizations Act (SARA), Title III

This product contains no chemicals subjected to reporting levels established by SARA Title III, Section 313.

California proposition 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

15.2 Chemical safety assessment

No chemical safety assessment has been carried out for this product.

Section 16. Other information

GHS classification and labelling

Not classified/Classification not possible

Full text of Hazard categories and Hazard statements referred to only section 3

Acute Tox. 2, H300 – Acute toxicity, Category 2: H300 Fatal if swallowed
Aquatic Acute 1, H400 – Hazardous to the aquatic environment, short-term (acute), Category 1: H400 Very toxic to aquatic life
Aquatic Chronic 1, H410 – Hazardous to the aquatic environment, long-term (chronic), Category 1: H410 Very toxic to aquatic life with long lasting effects
EUH032 – Contact with acids liberates very toxic gas.

References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN Recommendations on the TRANSPORT OF DANGEROUS GOODS 22nd edit., 2021 UN IMDG Code, 2020 Edition (Incorporating Amendment 40-20)
IATA Dangerous Goods Regulations (64th Edition) 2023
2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)
2023 TLVs and BEIs. (ACGIH)
JIS Z 7252 : 2019
JIS Z 7253 : 2019
2022 Recommendation on TLVs (JSOH)
Notification No. 0111-1 (January 11, 2022), Chemical Hazards Control Division, Industrial Safety and Health Department, Labour Standards Bureau, Ministry of Health, Labour and Welfare
Supplier's data/information
Hazard Communication Standard – 2012 (29 CFR 1910.1200)
Chemicals safety data management system "GHS Assistant" Version 4.24 (<https://www.asahi-ghs.com/>)

Abbreviations and acronyms

C – Ceiling limit; card – cardiac; dam – damage; impair – impairment

Revision information

First edition

General Disclaimer

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Japan official data (NITE published in 2021).

APOPCYTO Caspase-3 Colorimetric Assay Kit

Issue date: 28/Sep/2023

Safety Data Sheet
Section 1. Identification of the substance/mixture and of the company/undertaking
1.1 Product identifier:

Product name: APOPCYTO Caspase-3 Colorimetric Assay Kit

SDS NO : 4800_200M_E-1

Component: 2X Reaction Buffer

Product code:4800

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the product: Research and Development

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: Medical & Biological Laboratories (MBL) Co., Ltd.

Address: 1018-1 Terasawaoka, Ina-shi, Nagano-ken 396-0002, Japan

Division: SDS Support

Telephone number: +81-265-76-1777

e-mail address: sds-support@mbl.co.jp

1.4 Emergency telephone number: +81-265-76-1777 (Monday to Friday, 9 AM to 5 PM JST)
Section 2. Hazards identification

GHS classification and label elements of the product

2.1 Classification of the substance or mixture

Classification according to Hazard Communication Standard – 2012 (29 CFR 1910.1200)

Not classified/Classification not possible

2.2 Label elements

Labelling according to Hazard Communication Standard – 2012 (29 CFR 1910.1200)

No GHS label element

No Signal word

2.3 Other hazards

The product does not contain any ingredient designated as PBT and/or vPvB.

The product does not contain any ingredients designated as Endocrine disrupting properties.

Section 3. Composition/information on ingredients

Mixture/Substance selection:

3.2 Mixture

Ingredient name	Content (%)	CAS No.	ECNO	Classification according to REGULATION (EC) No.1272/2008 [CLP]
HEPES	2.38	7365-45-9	230-907-9	-
Sodium chloride	2.34	7647-14-5	231-598-3	-
di-potassium Dihydrogen Ethylenediaminetetraacetate	0.37	25102-12-9	-	-
Glycerin	10.00	56-81-5	200-289-5	-
CHAPS	0.10	75621-03-3	-	-
Water	84.00<	7732-18-5	231-791-2	-

Section 4. First-aid measures

4.1 Descriptions of first-aid measures

General measures

P314-Get medical advice/attention if you feel unwell.

IF INHALED

P304 + P312-Call a POISON CENTER/doctor/physician if you feel unwell.

IF ON SKIN (or hair)

P302 + P352-Wash with plenty of soap and water.

IF IN EYES

P305 + P351 + P338-Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF SWALLOWED

P301 + P312-Call a POISON CENTER/doctor/physician if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Specific information on symptom and effect are unknown.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

Unsuitable extinguishing media

Unsuitable extinguishing media data is not available.

5.2 Specific hazards arising from the substance or mixture

Specific hazards arising from the substance or mixture is not available.

5.3 Advice for firefighters

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters

P280A-Wear protective gloves/protective clothing/eye protection/face protection.

Section 6. Accidental release measures

6.1 Personnel precautions, protective equipment and emergency procedures

Stop leak if safe to do so.

6.2 Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

6.3 Methods and materials for containment and cleaning up

Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

Preventive measures for secondary accident

P376-Stop leak if safe to do so.

Stop leak if you can do it without risk.

Prevent entry into waterways, sewers, basements or confined areas.

6.4 Reference to other sections

Refer to section 13

Section 7. Handling and storage

7.1 Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

P260-Do not breathe dust/fume/gas/mist/vapors/spray.

Safety Measures

P280A-Wear protective gloves/protective clothing/eye protection/face protection.

Any incompatibilities data is not available.

Advice on general occupational hygiene

P264-Wash contaminated parts thoroughly after handling.

P270-Do not eat, drink or smoke when using this product.

7.2 Storage

Conditions for safe storage

P233-Keep container tightly closed.

P235 + P410-Keep cool. Protect from sunlight.

Container and packaging materials for safe handling data is not available.

7.3 Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section

7 is to be observed.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Adopted value

Adopted value in ACGIH is not available.

OSHA-PEL

(Glycerin)

TWA: 15mg/m³ (Total dust)

TWA: 5mg/m³ (Respirable fraction)

NIOSH-REL

(Glycerin)

See Appendix D

8.2 Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Individual protection measures

Hand protection

Wear protective gloves.

Eye protection

Wear eye/face protection.

Skin and body protection

Wear protective clothing.

Section 9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical state: Liquid

Color: Colorless

Odor data is not available.

Melting point/Freezing point data is not available.

Boiling point or initial boiling point data is not available.

Boiling range data is not available.

Flammability (gases, liquids and solids) data is not available.

Lower and upper explosion limit/flammability limit data is not available.

Flash point data is not available.

Auto-ignition temperature data is not available.

Decomposition temperature data is not available.

pH: No information

Kinematic viscosity data is not available.

Solubility:

Solubility in water data is not available.

n-Octanol/water partition coefficient data is not available.

Vapor pressure data is not available.

Density and/or relative density data is not available.

Relative vapor density (Air=1) data is not available.

Particle characteristics data is not available.

9.2 Other information

Other information is not available.

Section 10. Stability and Reactivity

10.1 Reactivity

Reactivity data is not available.

10.2 Chemical stability

Stable under normal storage/handling conditions.

10.3 Possibility of hazardous reactions

Possibility of hazardous reactions data is not available.

10.4 Conditions to avoid

Conditions to avoid data is not available.

10.5 Incompatible materials

Incompatible materials data is not available.

10.6 Hazardous decomposition products

Hazardous decomposition products data is not available.

Section 11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Acute toxicity (Dermal)

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Acute toxicity (Inhalation)

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Acute toxicity data is not available.

Irritant properties

Skin corrosion/irritation

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Skin corrosion/irritation data is not available.

Serious eye damage/irritation

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Serious eye damage/irritation data is not available.

Sensitization

Respiratory sensitization

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Skin sensitization

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Allergenic and sensitizing effects data is not available.

Germ cell mutagenicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Mutagenic effects data is not available.

Carcinogenicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Carcinogenic effects data is not available.

Reproductive toxicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Teratogenic effects data is not available.

Reproductive toxicity data is not available.

Specific target organ toxicity (STOT)

STOT-single exposure

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

STOT-single exposure data is not available.

STOT-repeated exposure

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

STOT-repeated exposure data is not available.

Aspiration hazard

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Aspiration hazard data is not available.

11.2 Information on other hazards

Endocrine disrupting properties is not available.

Section 12. Ecological Information

12.1 Toxicity

Aquatic toxicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Toxicity data is not available.

Water solubility

(Glycerin)

miscible (ICSC, 2006)

12.2 Persistence and degradability

Persistence and degradability data is not available.

12.3 Bioaccumulative potential

[Data for components of the product]

(Glycerin)

log Pow=-1.76 (ICSC, 2006)

12.4 Mobility in soil

Mobility in soil data is not available.

12.5 Results of PBT and vPvB assessment

APOPCYTO Caspase-3 Colorimetric Assay Kit

PBT and/or vPvB assessment data is not available.

12.6 Endocrine disrupting properties

Endocrine disrupting properties is not available.

12.7 Other adverse effects

Ozone depleting chemical data is not available.

Section 13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

13.1 Waste treatment methods

P273-Avoid release to the environment.

P501-Dispose of contents/container in accordance with local/national regulation.

Contaminated packing

Dispose of container after using the contents completely.

Section 14. Transport Information

UN No., UN CLASS

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

ADR (European Agreement concerning the International Carriage of Dangerous Goods by Road)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

ADN (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

RID (Regulation concerning the International Carriage of Dangerous goods by Rail)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

IMDG Code (International Maritime Dangerous Goods Regulations)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

IATA (Dangerous Goods Regulations)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

14.5 Environmental hazards

Marine pollutants (yes/no) : no

14.6 Special precautions for user

Special precautions for user is not applicable.

14.7 Maritime transport in bulk according to IMO instruments

MARPOL Annex II – Noxious Liquid Substances

Noxious Liquid Substances ; Cat. Z

Glycerin

Noxious Liquid Substances ; Cat. Z equiv.

Sodium chloride

Non Noxious Liquid Substances ; Cat. OS

Water

MARPOL Annex V – HME (Harmful to the Marine Environment)

Not applicable to Maritime transport in bulk according to IMO instruments.

Section 15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

The product does not contain any ingredients listed in REACH SVHC candidate list.

U.S. Toxic Substances Control Act (TSCA) Inventory

Chemicals listed in TSCA Inventory

Glycerin; HEPES; Sodium chloride; Water

Superfund Amendments and Reauthorizations Act (SARA), Title III

This product contains no chemicals subjected to reporting levels established by SARA Title III, Section 313.

California proposition 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

15.2 Chemical safety assessment

No chemical safety assessment has been carried out for this product.

Section 16. Other information

GHS classification and labelling

Not classified/Classification not possible

References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 22nd edit., 2021 UN

IMDG Code, 2020 Edition (Incorporating Amendment 40-20)

IATA Dangerous Goods Regulations (64th Edition) 2023

2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2023 TLVs and BEIs. (ACGIH)

JIS Z 7252 : 2019

JIS Z 7253 : 2019

2022 Recommendation on TLVs (JSOH)

Notification No. 0111-1 (January 11, 2022), Chemical Hazards Control Division, Industrial Safety and Health Department, Labour Standards Bureau, Ministry of Health, Labour and Welfare

Supplier's data/information

Hazard Communication Standard – 2012 (29 CFR 1910.1200)

Chemicals safety data management system "GHS Assistant" Version 4.24

[\(https://www.asahi-ghs.com/\)](https://www.asahi-ghs.com/)

Revision information

First edition

General Disclaimer

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your

safety.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Japan official data (NITE published in 2021).

APOPCYTO Caspase-3 Colorimetric Assay Kit

Issue date: 28/Sep/2023

Safety Data Sheet

Section 1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:

Product name: APOPCYTO Caspase-3 Colorimetric Assay Kit

SDS NO : 4800_300M_E-1

Component: 1M DTT

Product code:4800

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the product: Research and Development

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: Medical & Biological Laboratories (MBL) Co., Ltd.

Address: 1018-1 Terasawaoka, Ina-shi, Nagano-ken 396-0002, Japan

Division: SDS Support

Telephone number: +81-265-76-1777

e-mail address: sds-support@mbl.co.jp

1.4 Emergency telephone number: +81-265-76-1777 (Monday to Friday, 9 AM to 5 PM JST)

Section 2. Hazards identification

GHS classification and label elements of the product

2.1 Classification of the substance or mixture

Classification according to Hazard Communication Standard – 2012 (29 CFR 1910.1200)

HEALTH HAZARDS

Skin corrosion/irritation: Category 2

Serious eye damage/eye irritation: Category 2

2.2 Label elements

Labelling according to Hazard Communication Standard – 2012 (29 CFR 1910.1200)



Signal word: Warning

HAZARD STATEMENT

H315-Causes skin irritation

H319-Causes serious eye irritation

PRECAUTIONARY STATEMENT

Prevention

P264-Wash contaminated parts thoroughly after handling.

P280-Wear protective gloves.

P280-Wear eye protection/face protection.

Response

P302 + P352-IF ON SKIN: Wash with plenty of soap and water.

P332 + P313-If skin irritation occurs: Get medical advice/attention.

P362 + P364-Take off contaminated clothing and wash it before reuse.

P305 + P351 + P338-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313-If eye irritation persists: Get medical advice/attention.

2.3 Other hazards

The product does not contain any ingredient designated as PBT and/or vPvB.

APOPCYTO Caspase-3 Colorimetric Assay Kit

The product does not contain any ingredients designated as Endocrine disrupting properties.

Section 3. Composition/information on ingredients

Mixture/Substance selection:

3.2 Mixture

Ingredient name	Content (%)	CAS No.	ECNO	Classification according to REGULATION (EC) No.1272/2008 [CLP]
Dithiothreitol	15.40	3483-12-3	222-468-7	-
Water	84.00	7732-18-5	231-791-2	-

Section 4. First-aid measures

4.1 Descriptions of first-aid measures

General measures

P314-Get medical advice/attention if you feel unwell.

IF INHALED

P304 + P312-Call a POISON CENTER/doctor/physician if you feel unwell.

IF ON SKIN (or hair)

P302 + P352-Wash with plenty of soap and water.

P332 + P313-If skin irritation occurs: Get medical advice/attention.

IF IN EYES

P305 + P351 + P338-Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313-If eye irritation persists: Get medical advice/attention.

IF SWALLOWED

P301 + P312-Call a POISON CENTER/doctor/physician if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Specific information on symptom and effect are unknown.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

Unsuitable extinguishing media

Unsuitable extinguishing media data is not available.

5.2 Specific hazards arising from the substance or mixture

Specific hazards arising from the substance or mixture is not available.

5.3 Advice for firefighters

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters

P280A-Wear protective gloves/protective clothing/eye protection/face protection.

Section 6. Accidental release measures

6.1 Personnel precautions, protective equipment and emergency procedures

Stop leak if safe to do so.

APOPCYTO Caspase-3 Colorimetric Assay Kit

6.2 Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

6.3 Methods and materials for containment and cleaning up

Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

Preventive measures for secondary accident

P376-Stop leak if safe to do so.

Stop leak if you can do it without risk.

Prevent entry into waterways, sewers, basements or confined areas.

6.4 Reference to other sections

Refer to section 13

Section 7. Handling and storage

7.1 Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

P260-Do not breathe dust/fume/gas/mist/vapors/spray.

Safety Measures

P280A-Wear protective gloves/protective clothing/eye protection/face protection.

P280E-Wear protective gloves.

P280H-Wear eye protection/face protection.

Any incompatibilities data is not available.

Advice on general occupational hygiene

P264-Wash contaminated parts thoroughly after handling.

P270-Do not eat, drink or smoke when using this product.

P362 + P364-Take off contaminated clothing and wash it before reuse.

7.2 Storage

Conditions for safe storage

P233-Keep container tightly closed.

P235 + P410-Keep cool. Protect from sunlight.

Container and packaging materials for safe handling data is not available.

7.3 Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Adopted value

Adopted value in ACGIH is not available.

OSHA-PEL value is not available.

8.2 Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Individual protection measures

Hand protection

Wear protective gloves.

Eye protection

Wear eye/face protection.

Skin and body protection

Wear protective clothing.

APOPCYTO Caspase-3 Colorimetric Assay Kit

Section 9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical state: Liquid

Color: Colorless

Odor data is not available.

Melting point/Freezing point data is not available.

Boiling point or initial boiling point data is not available.

Boiling range data is not available.

Flammability (gases, liquids and solids) data is not available.

Lower and upper explosion limit/flammability limit data is not available.

Flash point data is not available.

Auto-ignition temperature data is not available.

Decomposition temperature data is not available.

pH: No information

Kinematic viscosity data is not available.

Solubility:

Solubility in water data is not available.

n-Octanol/water partition coefficient data is not available.

Vapor pressure data is not available.

Density and/or relative density data is not available.

Relative vapor density (Air=1) data is not available.

Particle characteristics data is not available.

9.2 Other information

Other information is not available.

Section 10. Stability and Reactivity

10.1 Reactivity

Reactivity data is not available.

10.2 Chemical stability

Stable under normal storage/handling conditions.

10.3 Possibility of hazardous reactions

Possibility of hazardous reactions data is not available.

10.4 Conditions to avoid

Conditions to avoid data is not available.

10.5 Incompatible materials

Incompatible materials data is not available.

10.6 Hazardous decomposition products

Hazardous decomposition products data is not available.

Section 11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Acute toxicity (Dermal)

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Acute toxicity (Inhalation)

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Acute toxicity data is not available.

Irritant properties

Skin corrosion/irritation

[Product]

Category 2, Causes skin irritation

[Product data]

No data available.

[Data for components of the product]

No data available.

Serious eye damage/irritation

[Product]

Category 2, Causes serious eye irritation

[Product data]

No data available.

[Data for components of the product]

No data available.

Sensitization

Respiratory sensitization

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Skin sensitization

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Allergenic and sensitizing effects data is not available.

Germ cell mutagenicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Mutagenic effects data is not available.

Carcinogenicity

[Product]

Classification not possible (Insufficient data available or no data available).

APOPCYTO Caspase-3 Colorimetric Assay Kit

[Product data]

No data available.

[Data for components of the product]

No data available.

Carcinogenic effects data is not available.

Reproductive toxicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Teratogenic effects data is not available.

Reproductive toxicity data is not available.

Specific target organ toxicity (STOT)

STOT-single exposure

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

STOT-single exposure data is not available.

STOT-repeated exposure

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

STOT-repeated exposure data is not available.

Aspiration hazard

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Aspiration hazard data is not available.

11.2 Information on other hazards

Endocrine disrupting properties is not available.

Section 12. Ecological Information

12.1 Toxicity

Aquatic toxicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Toxicity data is not available.

12.2 Persistence and degradability

APOPCYTO Caspase-3 Colorimetric Assay Kit

Persistence and degradability data is not available.

12.3 Bioaccumulative potential

Bioaccumulative potential data is not available.

12.4 Mobility in soil

Mobility in soil data is not available.

12.5 Results of PBT and vPvB assessment

PBT and/or vPvB assessment data is not available.

12.6 Endocrine disrupting properties

Endocrine disrupting properties is not available.

12.7 Other adverse effects

Ozone depleting chemical data is not available.

Section 13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

13.1 Waste treatment methods

P273–Avoid release to the environment.

P501–Dispose of contents/container in accordance with local/national regulation.

Contaminated packing

Dispose of container after using the contents completely.

Section 14. Transport Information

UN No., UN CLASS

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

ADR (European Agreement concerning the International Carriage of Dangerous Goods by Road)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

ADN (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

RID (Regulation concerning the International Carriage of Dangerous goods by Rail)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

IMDG Code (International Maritime Dangerous Goods Regulations)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

IATA (Dangerous Goods Regulations)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

APOPCYTO Caspase-3 Colorimetric Assay Kit

14.4 Packing group : Not regulated

14.5 Environmental hazards

Marine pollutants (yes/no) : no

14.6 Special precautions for user

Special precautions for user is not applicable.

14.7 Maritime transport in bulk according to IMO instruments

MARPOL Annex II – Noxious Liquid Substances

Non Noxious Liquid Substances ; Cat. OS

Water

MARPOL Annex V – HME (Harmful to the Marine Environment)

Not applicable to Maritime transport in bulk according to IMO instruments.

Section 15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

The product does not contain any ingredients listed in REACH SVHC candidate list.

U.S. Toxic Substances Control Act (TSCA) Inventory

Chemicals listed in TSCA Inventory

Dithiothreitol; Water

Superfund Amendments and Reauthorizations Act (SARA), Title III

This product contains no chemicals subjected to reporting levels established by SARA Title III, Section 313.

California proposition 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

15.2 Chemical safety assessment

No chemical safety assessment has been carried out for this product.

Section 16. Other information

GHS classification and labelling

H315–Skin corrosion/irritation, Category 2: H315 Causes skin irritation

H319–Serious eye damage/eye irritation, Category 2: H319 Causes serious eye irritation

References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 22nd edit., 2021 UN

IMDG Code, 2020 Edition (Incorporating Amendment 40–20)

IATA Dangerous Goods Regulations (64th Edition) 2023

2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2023 TLVs and BEIs. (ACGIH)

JIS Z 7252 : 2019

JIS Z 7253 : 2019

2022 Recommendation on TLVs (JSOH)

Notification No. 0111-1 (January 11, 2022), Chemical Hazards Control Division, Industrial Safety and Health Department, Labour Standards Bureau, Ministry of Health, Labour and Welfare

Supplier's data/information

Hazard Communication Standard – 2012 (29 CFR 1910.1200)

Chemicals safety data management system "GHS Assistant" Version 4.24

(<https://www.asahi-ghs.com/>)

Revision information

First edition

General Disclaimer

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Japan official data (NITE published in 2021).

APOPCYTO Caspase-3 Colorimetric Assay Kit

Issue date: 28/Sep/2023

Safety Data Sheet

Section 1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:

Product name: APOPCYTO Caspase-3 Colorimetric Assay Kit

SDS NO : 4800_400M_E-1

Component: Substrate DEVD-pNA(10mM)

Product code:4800

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the product: Research and Development

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: Medical & Biological Laboratories (MBL) Co., Ltd.

Address: 1018-1 Terasawaoka, Ina-shi, Nagano-ken 396-0002, Japan

Division: SDS Support

Telephone number: +81-265-76-1777

e-mail address: sds-support@mbl.co.jp

1.4 Emergency telephone number: +81-265-76-1777 (Monday to Friday, 9 AM to 5 PM JST)

Section 2. Hazards identification

GHS classification and label elements of the product

2.1 Classification of the substance or mixture

Classification according to Hazard Communication Standard – 2012 (29 CFR 1910.1200)

HEALTH HAZARDS

Specific target organ toxicity – single exposure: Category 2

2.2 Label elements

Labelling according to Hazard Communication Standard – 2012 (29 CFR 1910.1200)



Signal word: Warning

HAZARD STATEMENT

H371-May cause damage to organs

PRECAUTIONARY STATEMENT

Prevention

P260-Do not breathe dust/fume/gas/mist/vapors/spray.

P264-Wash contaminated parts thoroughly after handling.

P270-Do not eat, drink or smoke when using this product.

Response

P308 + P311-IF exposed or concerned: Call a POISON CENTER/doctor/physician.

Disposal

P501-Dispose of contents/container in accordance with local/national regulation.

2.3 Other hazards

The product does not contain any ingredient designated as PBT and/or vPvB.

The product does not contain any ingredients designated as Endocrine disrupting properties.

Section 3. Composition/information on ingredients

Mixture/Substance selection:

3.2 Mixture

Ingredient name	Content (%)	CAS No.	ECNO	Classification according to REGULATION (EC) No.1272/2008 [CLP]
Ac-DEVD-pNA	0.64	189950-66-1	-	-
Dimethyl sulfoxide	99.00<	67-68-5	200-664-3	-

Section 4. First-aid measures

4.1 Descriptions of first-aid measures

General measures

P314-Get medical advice/attention if you feel unwell.

P308 + P311-IF exposed or concerned: Call a POISON CENTER/doctor/physician.

IF INHALED

P304 + P312-Call a POISON CENTER/doctor/physician if you feel unwell.

IF ON SKIN (or hair)

P302 + P352-Wash with plenty of soap and water.

IF IN EYES

P305 + P351 + P338-Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF SWALLOWED

P301 + P312-Call a POISON CENTER/doctor/physician if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Specific information on symptom and effect are unknown.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

Unsuitable extinguishing media

Unsuitable extinguishing media data is not available.

5.2 Specific hazards arising from the substance or mixture

Specific hazards arising from the substance or mixture is not available.

5.3 Advice for firefighters

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters

P280A-Wear protective gloves/protective clothing/eye protection/face protection.

Section 6. Accidental release measures

6.1 Personnel precautions, protective equipment and emergency procedures

Stop leak if safe to do so.

6.2 Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

6.3 Methods and materials for containment and cleaning up

Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

APOPCYTO Caspase-3 Colorimetric Assay Kit

Preventive measures for secondary accident

P376-Stop leak if safe to do so.

Stop leak if you can do it without risk.

Prevent entry into waterways, sewers, basements or confined areas.

6.4 Reference to other sections

Refer to section 13

Section 7. Handling and storage

7.1 Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

P260-Do not breathe dust/fume/gas/mist/vapors/spray.

Safety Measures

P280A-Wear protective gloves/protective clothing/eye protection/face protection.

Any incompatibilities data is not available.

Advice on general occupational hygiene

P264-Wash contaminated parts thoroughly after handling.

P270-Do not eat, drink or smoke when using this product.

7.2 Storage

Conditions for safe storage

P233-Keep container tightly closed.

P235 + P410-Keep cool. Protect from sunlight.

Container and packaging materials for safe handling data is not available.

7.3 Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section

7 is to be observed.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Adopted value

Adopted value in ACGIH is not available.

OSHA-PEL value is not available.

8.2 Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Individual protection measures

Hand protection

Wear protective gloves.

Eye protection

Wear eye/face protection.

Skin and body protection

Wear protective clothing.

Section 9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical state: Liquid

Color: Pale yellow

Odor data is not available.

Melting point/Freezing point data is not available.

Boiling point or initial boiling point data is not available.

Boiling range data is not available.

APOPCYTO Caspase-3 Colorimetric Assay Kit

Flammability (gases, liquids and solids) data is not available.
Lower and upper explosion limit/flammability limit data is not available.
Flash point data is not available.
Auto-ignition temperature data is not available.
Decomposition temperature data is not available.
pH: No information
Kinematic viscosity data is not available.
Solubility:
 Solubility in water data is not available.
n-Octanol/water partition coefficient data is not available.
Vapor pressure data is not available.
Density and/or relative density data is not available.
Relative vapor density (Air=1) data is not available.
Particle characteristics data is not available.

9.2 Other information

Other information is not available.

Section 10. Stability and Reactivity

10.1 Reactivity

Reactivity data is not available.

10.2 Chemical stability

Stable under normal storage/handling conditions.

10.3 Possibility of hazardous reactions

Possibility of hazardous reactions data is not available.

10.4 Conditions to avoid

Conditions to avoid data is not available.

10.5 Incompatible materials

Incompatible materials data is not available.

10.6 Hazardous decomposition products

Sulfur oxides

Section 11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Acute toxicity (Dermal)

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Acute toxicity (Inhalation)

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

APOPCYTO Caspase-3 Colorimetric Assay Kit

No data available.

[Data for components of the product]

No data available.

Acute toxicity data is not available.

Irritant properties

Skin corrosion/irritation

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Skin corrosion/irritation data is not available.

Serious eye damage/irritation

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Serious eye damage/irritation data is not available.

Sensitization

Respiratory sensitization

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Skin sensitization

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Allergenic and sensitizing effects data is not available.

Germ cell mutagenicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Mutagenic effects data is not available.

Carcinogenicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Carcinogenic effects data is not available.

Reproductive toxicity

APOPCYTO Caspase-3 Colorimetric Assay Kit

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Teratogenic effects data is not available.

Reproductive toxicity data is not available.

Specific target organ toxicity (STOT)

STOT-single exposure

[Product]

Category 2, May cause damage to organs

[Product data]

No data available.

[Data for components of the product]

No data available.

STOT-repeated exposure

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

STOT-repeated exposure data is not available.

Aspiration hazard

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Aspiration hazard data is not available.

11.2 Information on other hazards

Endocrine disrupting properties is not available.

Section 12. Ecological Information

12.1 Toxicity

Aquatic toxicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Toxicity data is not available.

Water solubility

(Dimethyl sulfoxide)

miscible (ICSC, 2000)

12.2 Persistence and degradability

Persistence and degradability data is not available.

12.3 Bioaccumulative potential

[Data for components of the product]

(Dimethyl sulfoxide)

APOPCYTO Caspase-3 Colorimetric Assay Kit

log Pow=-1.35 (calculated) (ICSC, 2000)

12.4 Mobility in soil

Mobility in soil data is not available.

12.5 Results of PBT and vPvB assessment

PBT and/or vPvB assessment data is not available.

12.6 Endocrine disrupting properties

Endocrine disrupting properties is not available.

12.7 Other adverse effects

Ozone depleting chemical data is not available.

Section 13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

13.1 Waste treatment methods

P273-Avoid release to the environment.

P501-Dispose of contents/container in accordance with local/national regulation.

Contaminated packing

Dispose of container after using the contents completely.

Section 14. Transport Information

UN No., UN CLASS

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

ADR (European Agreement concerning the International Carriage of Dangerous Goods by Road)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

ADN (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

RID (Regulation concerning the International Carriage of Dangerous goods by Rail)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

IMDG Code (International Maritime Dangerous Goods Regulations)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

IATA (Dangerous Goods Regulations)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

14.5 Environmental hazards

APOPCYTO Caspase-3 Colorimetric Assay Kit

Marine pollutants (yes/no) : no

14.6 Special precautions for user

Special precautions for user is not applicable.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable to Transport in bulk according to Annex II of MARPOL and the IBC Code
MARPOL Annex V – HME (Harmful to the Marine Environment)

Not applicable to Maritime transport in bulk according to IMO instruments.

Section 15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

The product does not contain any ingredients listed in REACH SVHC candidate list.

U.S. Toxic Substances Control Act (TSCA) Inventory

Chemicals listed in TSCA Inventory

Dimethyl sulfoxide

Superfund Amendments and Reauthorizations Act (SARA), Title III

This product contains no chemicals subjected to reporting levels established by SARA Title III, Section 313.

California proposition 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

15.2 Chemical safety assessment

No chemical safety assessment has been carried out for this product.

Section 16. Other information

GHS classification and labelling

H371–STOT – single exposure, Category 2: H371 May cause damage to organs

References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN
Recommendations on the TRANSPORT OF DANGEROUS GOODS 22nd edit., 2021 UN
IMDG Code, 2020 Edition (Incorporating Amendment 40–20)

IATA Dangerous Goods Regulations (64th Edition) 2023

2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2023 TLVs and BEIs. (ACGIH)

JIS Z 7252 : 2019

JIS Z 7253 : 2019

2022 Recommendation on TLVs (JISOH)

Notification No. 0111-1 (January 11, 2022), Chemical Hazards Control Division, Industrial Safety and Health Department, Labour Standards Bureau, Ministry of Health, Labour and Welfare

Supplier's data/information

Hazard Communication Standard – 2012 (29 CFR 1910.1200)

Chemicals safety data management system "GHS Assistant" Version 4.24

(<https://www.asahi-ghs.com/>)

Revision information

First edition

General Disclaimer

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.

The data given here is based on current knowledge and experience. The purpose of this

Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.
The GHS classification data given here is based on current Japan official data (NITE published in 2021).

APOPCYTO Caspase-3 Colorimetric Assay Kit

Issue date: 28/Sep/2023

Safety Data Sheet

Section 1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:

Product name: APOPCYTO Caspase-3 Colorimetric Assay Kit

SDS NO : 4800_500M_E-1

Component: Inhibitor DEVD-FMK(1mM)

Product code:4800

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the product: Research and Development

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: Medical & Biological Laboratories (MBL) Co., Ltd.

Address: 1018-1 Terasawaoka, Ina-shi, Nagano-ken 396-0002, Japan

Division: SDS Support

Telephone number: +81-265-76-1777

e-mail address: sds-support@mbl.co.jp

1.4 Emergency telephone number: +81-265-76-1777 (Monday to Friday, 9 AM to 5 PM JST)

Section 2. Hazards identification

GHS classification and label elements of the product

2.1 Classification of the substance or mixture

Classification according to Hazard Communication Standard – 2012 (29 CFR 1910.1200)

HEALTH HAZARDS

Specific target organ toxicity – single exposure: Category 2

2.2 Label elements

Labelling according to Hazard Communication Standard – 2012 (29 CFR 1910.1200)



Signal word: Warning

HAZARD STATEMENT

H371-May cause damage to organs

PRECAUTIONARY STATEMENT

Prevention

P260-Do not breathe dust/fume/gas/mist/vapors/spray.

P264-Wash contaminated parts thoroughly after handling.

P270-Do not eat, drink or smoke when using this product.

Response

P308 + P311-IF exposed or concerned: Call a POISON CENTER/doctor/physician.

Disposal

P501-Dispose of contents/container in accordance with local/national regulation.

2.3 Other hazards

The product does not contain any ingredient designated as PBT and/or vPvB.

The product does not contain any ingredients designated as Endocrine disrupting properties.

Section 3. Composition/information on ingredients

Mixture/Substance selection:

3.2 Mixture

Ingredient name	Content (%)	CAS No.	ECNO	Classification according to REGULATION (EC) No.1272/2008 [CLP]
Z-DEVD-FMK	0.05	210344-95-9	-	-
Dimethyl sulfoxide	99.00<	67-68-5	200-664-3	-

Section 4. First-aid measures

4.1 Descriptions of first-aid measures

General measures

P314-Get medical advice/attention if you feel unwell.

P308 + P311-IF exposed or concerned: Call a POISON CENTER/doctor/physician.

IF INHALED

P304 + P312-Call a POISON CENTER/doctor/physician if you feel unwell.

IF ON SKIN (or hair)

P302 + P352-Wash with plenty of soap and water.

IF IN EYES

P305 + P351 + P338-Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF SWALLOWED

P301 + P312-Call a POISON CENTER/doctor/physician if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Specific information on symptom and effect are unknown.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

Unsuitable extinguishing media

Unsuitable extinguishing media data is not available.

5.2 Specific hazards arising from the substance or mixture

Specific hazards arising from the substance or mixture is not available.

5.3 Advice for firefighters

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters

P280A-Wear protective gloves/protective clothing/eye protection/face protection.

Section 6. Accidental release measures

6.1 Personnel precautions, protective equipment and emergency procedures

Stop leak if safe to do so.

6.2 Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

6.3 Methods and materials for containment and cleaning up

Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

APOPCYTO Caspase-3 Colorimetric Assay Kit

Preventive measures for secondary accident

P376-Stop leak if safe to do so.

Stop leak if you can do it without risk.

Prevent entry into waterways, sewers, basements or confined areas.

6.4 Reference to other sections

Refer to section 13

Section 7. Handling and storage

7.1 Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

P260-Do not breathe dust/fume/gas/mist/vapors/spray.

Safety Measures

P280-Wear protective gloves/protective clothing/eye protection/face protection.

Any incompatibilities data is not available.

Advice on general occupational hygiene

P264-Wash contaminated parts thoroughly after handling.

P270-Do not eat, drink or smoke when using this product.

7.2 Storage

Conditions for safe storage

P233-Keep container tightly closed.

P235 + P410-Keep cool. Protect from sunlight.

Container and packaging materials for safe handling data is not available.

7.3 Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section

7 is to be observed.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Adopted value

Adopted value in ACGIH is not available.

OSHA-PEL value is not available.

8.2 Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Individual protection measures

Hand protection

Wear protective gloves.

Eye protection

Wear eye/face protection.

Skin and body protection

Wear protective clothing.

Section 9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical state: Liquid

Color: Pale yellow

Odor data is not available.

Melting point/Freezing point data is not available.

Boiling point or initial boiling point data is not available.

Boiling range data is not available.

APOPCYTO Caspase-3 Colorimetric Assay Kit

Flammability (gases, liquids and solids) data is not available.
Lower and upper explosion limit/flammability limit data is not available.
Flash point data is not available.
Auto-ignition temperature data is not available.
Decomposition temperature data is not available.
pH: No information
Kinematic viscosity data is not available.
Solubility:
 Solubility in water data is not available.
n-Octanol/water partition coefficient data is not available.
Vapor pressure data is not available.
Density and/or relative density data is not available.
Relative vapor density (Air=1) data is not available.
Particle characteristics data is not available.

9.2 Other information

Other information is not available.

Section 10. Stability and Reactivity

10.1 Reactivity

Reactivity data is not available.

10.2 Chemical stability

Stable under normal storage/handling conditions.

10.3 Possibility of hazardous reactions

Possibility of hazardous reactions data is not available.

10.4 Conditions to avoid

Conditions to avoid data is not available.

10.5 Incompatible materials

Incompatible materials data is not available.

10.6 Hazardous decomposition products

Sulfur oxides

Section 11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Acute toxicity (Dermal)

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Acute toxicity (Inhalation)

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

APOPCYTO Caspase-3 Colorimetric Assay Kit

No data available.

[Data for components of the product]

No data available.

Acute toxicity data is not available.

Irritant properties

Skin corrosion/irritation

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Skin corrosion/irritation data is not available.

Serious eye damage/irritation

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Serious eye damage/irritation data is not available.

Sensitization

Respiratory sensitization

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Skin sensitization

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Allergenic and sensitizing effects data is not available.

Germ cell mutagenicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Mutagenic effects data is not available.

Carcinogenicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Carcinogenic effects data is not available.

Reproductive toxicity

APOPCYTO Caspase-3 Colorimetric Assay Kit

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Teratogenic effects data is not available.

Reproductive toxicity data is not available.

Specific target organ toxicity (STOT)

STOT-single exposure

[Product]

Category 2, May cause damage to organs

[Product data]

No data available.

[Data for components of the product]

No data available.

STOT-repeated exposure

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

STOT-repeated exposure data is not available.

Aspiration hazard

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Aspiration hazard data is not available.

11.2 Information on other hazards

Endocrine disrupting properties is not available.

Section 12. Ecological Information

12.1 Toxicity

Aquatic toxicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Toxicity data is not available.

Water solubility

(Dimethyl sulfoxide)

miscible (ICSC, 2000)

12.2 Persistence and degradability

Persistence and degradability data is not available.

12.3 Bioaccumulative potential

[Data for components of the product]

(Dimethyl sulfoxide)

APOPCYTO Caspase-3 Colorimetric Assay Kit

log Pow=-1.35 (calculated) (ICSC, 2000)

12.4 Mobility in soil

Mobility in soil data is not available.

12.5 Results of PBT and vPvB assessment

PBT and/or vPvB assessment data is not available.

12.6 Endocrine disrupting properties

Endocrine disrupting properties is not available.

12.7 Other adverse effects

Ozone depleting chemical data is not available.

Section 13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

13.1 Waste treatment methods

P273-Avoid release to the environment.

P501-Dispose of contents/container in accordance with local/national regulation.

Contaminated packing

Dispose of container after using the contents completely.

Section 14. Transport Information

UN No., UN CLASS

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

ADR (European Agreement concerning the International Carriage of Dangerous Goods by Road)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

ADN (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

RID (Regulation concerning the International Carriage of Dangerous goods by Rail)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

IMDG Code (International Maritime Dangerous Goods Regulations)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

IATA (Dangerous Goods Regulations)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

14.5 Environmental hazards

APOPCYTO Caspase-3 Colorimetric Assay Kit

Marine pollutants (yes/no) : no

14.6 Special precautions for user

Special precautions for user is not applicable.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable to Transport in bulk according to Annex II of MARPOL and the IBC Code
MARPOL Annex V – HME (Harmful to the Marine Environment)

Not applicable to Maritime transport in bulk according to IMO instruments.

Section 15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

The product does not contain any ingredients listed in REACH SVHC candidate list.

U.S. Toxic Substances Control Act (TSCA) Inventory

Chemicals listed in TSCA Inventory

Dimethyl sulfoxide

Superfund Amendments and Reauthorizations Act (SARA), Title III

This product contains no chemicals subjected to reporting levels established by SARA Title III, Section 313.

California proposition 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

15.2 Chemical safety assessment

No chemical safety assessment has been carried out for this product.

Section 16. Other information

GHS classification and labelling

H371–STOT – single exposure, Category 2: H371 May cause damage to organs

References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN
Recommendations on the TRANSPORT OF DANGEROUS GOODS 22nd edit., 2021 UN
IMDG Code, 2020 Edition (Incorporating Amendment 40–20)

IATA Dangerous Goods Regulations (64th Edition) 2023

2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2023 TLVs and BEIs. (ACGIH)

JIS Z 7252 : 2019

JIS Z 7253 : 2019

2022 Recommendation on TLVs (JSOH)

Notification No. 0111–1 (January 11, 2022), Chemical Hazards Control Division, Industrial Safety and Health Department, Labour Standards Bureau, Ministry of Health, Labour and Welfare

Supplier's data/information

Hazard Communication Standard – 2012 (29 CFR 1910.1200)

Chemicals safety data management system "GHS Assistant" Version 4.24

(<https://www.asahi-ghs.com/>)

Revision information

First edition

General Disclaimer

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.

The data given here is based on current knowledge and experience. The purpose of this

Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.
The GHS classification data given here is based on current Japan official data (NITE published in 2021).

APOPCYTO Caspase-3 Colorimetric Assay Kit

Issue date: 28/Sep/2023

Safety Data Sheet

Section 1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:

Product name: APOPCYTO Caspase-3 Colorimetric Assay Kit

SDS NO : 4800_600M_E-1

Component: 100mM pNA(p-nitroanilide)

Product code:4800

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the product: Research and Development

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: Medical & Biological Laboratories (MBL) Co., Ltd.

Address: 1018-1 Terasawaoka, Ina-shi, Nagano-ken 396-0002, Japan

Division: SDS Support

Telephone number: +81-265-76-1777

e-mail address: sds-support@mbl.co.jp

1.4 Emergency telephone number: +81-265-76-1777 (Monday to Friday, 9 AM to 5 PM JST)

Section 2. Hazards identification

GHS classification and label elements of the product

2.1 Classification of the substance or mixture

Classification according to Hazard Communication Standard – 2012 (29 CFR 1910.1200)

HEALTH HAZARDS

Specific target organ toxicity – single exposure: Category 2

Specific target organ toxicity – repeated exposure: Category 2

2.2 Label elements

Labelling according to Hazard Communication Standard – 2012 (29 CFR 1910.1200)



Signal word: Warning

HAZARD STATEMENT

H371-May cause damage to organs

H373-May cause damage to organs through prolonged or repeated exposure

PRECAUTIONARY STATEMENT

Prevention

P260-Do not breathe dust/fume/gas/mist/vapors/spray.

P264-Wash contaminated parts thoroughly after handling.

P270-Do not eat, drink or smoke when using this product.

Response

P314-Get medical advice/attention if you feel unwell.

P308 + P311-IF exposed or concerned: Call a POISON CENTER/doctor/physician.

Disposal

P501-Dispose of contents/container in accordance with local/national regulation.

2.3 Other hazards

The product does not contain any ingredient designated as PBT and/or vPvB.

The product does not contain any ingredients designated as Endocrine disrupting properties.

APOPCYTO Caspase-3 Colorimetric Assay Kit

Section 3. Composition/information on ingredients

Mixture/Substance selection:

3.2 Mixture

Ingredient name	Content (%)	CAS No.	ECNO	Classification according to REGULATION (EC) No.1272/2008 [CLP]
p-Nitroaniline	1.38	100-01-6	202-810-1	Acute Tox. 3 *, H331; Acute Tox. 3 *, H311; Acute Tox. 3 *, H301; STOT RE 2 *, H373 **; Aquatic Chronic 3, H412 [SCL's, M-Factors, ATE, Component notes] note:[C]
Dimethyl sulfoxide	98.00<	67-68-5	200-664-3	-

Section 4. First-aid measures

4.1 Descriptions of first-aid measures

General measures

P314-Get medical advice/attention if you feel unwell.

P308 + P311-IF exposed or concerned: Call a POISON CENTER/doctor/physician.

IF INHALED

P304 + P312-Call a POISON CENTER/doctor/physician if you feel unwell.

IF ON SKIN (or hair)

P302 + P352-Wash with plenty of soap and water.

IF IN EYES

P305 + P351 + P338-Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF SWALLOWED

P301 + P312-Call a POISON CENTER/doctor/physician if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Specific information on symptom and effect are unknown.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

Unsuitable extinguishing media

Unsuitable extinguishing media data is not available.

5.2 Specific hazards arising from the substance or mixture

Specific hazards arising from the substance or mixture is not available.

5.3 Advice for firefighters

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters

P280A-Wear protective gloves/protective clothing/eye protection/face protection.

Section 6. Accidental release measures

APOPCYTO Caspase-3 Colorimetric Assay Kit

6.1 Personnel precautions, protective equipment and emergency procedures

Stop leak if safe to do so.

6.2 Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

6.3 Methods and materials for containment and cleaning up

Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

Preventive measures for secondary accident

P376-Stop leak if safe to do so.

Stop leak if you can do it without risk.

Prevent entry into waterways, sewers, basements or confined areas.

6.4 Reference to other sections

Refer to section 13

Section 7. Handling and storage

7.1 Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

P260-Do not breathe dust/fume/gas/mist/vapors/spray.

Safety Measures

P280A-Wear protective gloves/protective clothing/eye protection/face protection.

Any incompatibilities data is not available.

Advice on general occupational hygiene

P264-Wash contaminated parts thoroughly after handling.

P270-Do not eat, drink or smoke when using this product.

7.2 Storage

Conditions for safe storage

P233-Keep container tightly closed.

P235 + P410-Keep cool. Protect from sunlight.

Container and packaging materials for safe handling data is not available.

7.3 Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Adopted value

(p-Nitroaniline)

ACGIH(1996) TWA: 3mg/m³ (MeHb-emia; liver dam; eye irr)

Notation

(p-Nitroaniline)

Skin

OSHA-PEL

(p-Nitroaniline)

TWA: 1ppm, 6mg/m³

NIOSH-REL

(p-Nitroaniline)

TWA: 3mg/m³

8.2 Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Individual protection measures

Hand protection

Wear protective gloves.

Eye protection

Wear eye/face protection.

Skin and body protection

Wear protective clothing.

Section 9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical state: Liquid

Color: Pale yellow

Odor data is not available.

Melting point/Freezing point data is not available.

Boiling point or initial boiling point data is not available.

Boiling range data is not available.

Flammability (gases, liquids and solids) data is not available.

Lower and upper explosion limit/flammability limit data is not available.

Flash point data is not available.

Auto-ignition temperature data is not available.

Decomposition temperature data is not available.

pH: No information

Kinematic viscosity data is not available.

Solubility:

Solubility in water data is not available.

n-Octanol/water partition coefficient data is not available.

Vapor pressure data is not available.

Density and/or relative density data is not available.

Relative vapor density (Air=1) data is not available.

Particle characteristics data is not available.

9.2 Other information

Other information is not available.

Section 10. Stability and Reactivity

10.1 Reactivity

Reactivity data is not available.

10.2 Chemical stability

Stable under normal storage/handling conditions.

10.3 Possibility of hazardous reactions

Possibility of hazardous reactions data is not available.

10.4 Conditions to avoid

Conditions to avoid data is not available.

10.5 Incompatible materials

Incompatible materials data is not available.

10.6 Hazardous decomposition products

Sulfur oxides

Section 11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[Product]

APOPCYTO Caspase-3 Colorimetric Assay Kit

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Acute toxicity (Dermal)

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Acute toxicity (Inhalation)

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Acute toxicity data is not available.

Irritant properties

Skin corrosion/irritation

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Skin corrosion/irritation data is not available.

Serious eye damage/irritation

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Serious eye damage/irritation data is not available.

Sensitization

Respiratory sensitization

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Skin sensitization

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Allergenic and sensitizing effects data is not available.

Germ cell mutagenicity

APOPCYTO Caspase-3 Colorimetric Assay Kit

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Mutagenic effects data is not available.

Carcinogenicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

[ACGIH]

(p-Nitroaniline)

A4(1996) : Not Classifiable as a Human Carcinogen

Reproductive toxicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Teratogenic effects data is not available.

Reproductive toxicity data is not available.

Specific target organ toxicity (STOT)

STOT-single exposure

[Product]

Category 2, May cause damage to organs

[Product data]

No data available.

[Data for components of the product]

No data available.

STOT-repeated exposure

[Product]

Category 2, May cause damage to organs through prolonged or repeated exposure

[Product data]

No data available.

[Data for components of the product]

No data available.

Aspiration hazard

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Aspiration hazard data is not available.

11.2 Information on other hazards

Endocrine disrupting properties is not available.

Section 12. Ecological Information

APOPCYTO Caspase-3 Colorimetric Assay Kit

12.1 Toxicity

Aquatic toxicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Product data]

No data available.

[Data for components of the product]

No data available.

Toxicity data is not available.

Water solubility

(p-Nitroaniline)

0.08 g/100 ml (18.5°C) (ICSC, 2001)

(Dimethyl sulfoxide)

miscible (ICSC, 2000)

12.2 Persistence and degradability

[Data for components of the product]

(p-Nitroaniline)

Not rapidly degradable (BOD_Degradation : 0% (METI existing chemical safety inspections, 1977))

12.3 Bioaccumulative potential

[Data for components of the product]

(p-Nitroaniline)

log Pow=2.66 (ICSC, 2001); BCF=3.6 (Check & Review, Japan)

(Dimethyl sulfoxide)

log Pow=-1.35 (calculated) (ICSC, 2000)

12.4 Mobility in soil

Mobility in soil data is not available.

12.5 Results of PBT and vPvB assessment

PBT and/or vPvB assessment data is not available.

12.6 Endocrine disrupting properties

Endocrine disrupting properties is not available.

12.7 Other adverse effects

Ozone depleting chemical data is not available.

Section 13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

13.1 Waste treatment methods

P273-Avoid release to the environment.

P501-Dispose of contents/container in accordance with local/national regulation.

Contaminated packing

Dispose of container after using the contents completely.

Section 14. Transport Information

UN No., UN CLASS

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

ADR (European Agreement concerning the International Carriage of Dangerous Goods by Road)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

APOPCYTO Caspase-3 Colorimetric Assay Kit

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

ADN (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

RID (Regulation concerning the International Carriage of Dangerous goods by Rail)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

IMDG Code (International Maritime Dangerous Goods Regulations)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

IATA (Dangerous Goods Regulations)

14.1 UN Number or ID Number : Not regulated

14.2 UN Proper Shipping Name : Not regulated

14.3 Class or division (Transport hazard class) : Not regulated

14.4 Packing group : Not regulated

14.5 Environmental hazards

Marine pollutants (yes/no) : no

14.6 Special precautions for user

Special precautions for user is not applicable.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable to Transport in bulk according to Annex II of MARPOL and the IBC Code
MARPOL Annex V – HME (Harmful to the Marine Environment)

Specific target organ toxicity – repeated exposure: cat.1

p-Nitroaniline

Hazardous to the aquatic environment – long-term (chronic): cat.1, 2

p-Nitroaniline

Section 15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

The product does not contain any ingredients listed in REACH SVHC candidate list.

U.S. Toxic Substances Control Act (TSCA) Inventory

Chemicals listed in TSCA Inventory

Dimethyl sulfoxide; p-Nitroaniline

Superfund Amendments and Reauthorizations Act (SARA), Title III

SARA 313 (TRI)

p-Nitroaniline

California proposition 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

15.2 Chemical safety assessment

No chemical safety assessment has been carried out for this product.

Section 16. Other information

GHS classification and labelling

H371-STOT – single exposure, Category 2: H371 May cause damage to organs

H373-STOT – Repeated exposure, Category 2: H373 May cause damage to organs through prolonged or repeated exposure

Full text of Hazard categories and Hazard statements referred to only section 3

Acute Tox. 3, H301 – Acute toxicity, Category 3: H301 Toxic if swallowed

Acute Tox. 3, H311 – Acute toxicity, Category 3: H311 Toxic in contact with skin

Acute Tox. 3, H331 – Acute toxicity, Category 3: H331 Toxic if inhaled

Aquatic Chronic 3, H412 – Hazardous to the aquatic environment, long-term (chronic),

Category 3: H412 Harmful to aquatic life with long lasting effects

References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 22nd edit., 2021 UN

IMDG Code, 2020 Edition (Incorporating Amendment 40-20)

IATA Dangerous Goods Regulations (64th Edition) 2023

2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2023 TLVs and BEIs. (ACGIH)

JIS Z 7252 : 2019

JIS Z 7253 : 2019

2022 Recommendation on TLVs (JSOH)

Notification No. 0111-1 (January 11, 2022), Chemical Hazards Control Division, Industrial Safety and Health Department, Labour Standards Bureau, Ministry of Health, Labour and Welfare

Supplier's data/information

Hazard Communication Standard – 2012 (29 CFR 1910.1200)

Chemicals safety data management system "GHS Assistant" Version 4.24

(<https://www.asahi-ghs.com/>)

Abbreviations and acronyms

dam – damage; irr – irritation; MeHb-emia – methemoglobinemia

Revision information

First edition

General Disclaimer

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Japan official data (NITE published in 2021).